

# SEARCH REQUEST FORM

30

Requestor's Name: Christina Annick Serial Number: 08/634,255  
Date: 7/8/97 Phone: 308-6398 Art Unit: 2108

## Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Claims 6 & 7 - Structures circled in red.  
Any questions, please call.  
Thank.

## STAFF USE ONLY

Date completed:

Searcher: ES

Terminal time: 2

Elapsed time:                     

CPU time:                     

Total time: 25

Number of Searches:                     

Number of Databases: 2

### Search Site

☒ STIC

☐ CM-1

☐ Pre-S

### Type of Search

☐ N.A. Sequence

☐ A.A. Sequence

☒ Structure (9) (and)

☒ Bibliographic

### Vendors

☐ IG Suite

☒ STN

☐ Dialog

☐ APS

☐ Geninfo

☐ SDC

☐ DARC/Questel

☐ Other

WHAT IS CLAIMED IS:

1. A liquid jet recording head comprising a constituting member formed from a cured product of a resin composition comprising:

- 5 (1) a curable epoxy compound,  
(2) a compound having a functional group reactive to the curable epoxy compound and a fluorocarbon moiety, and  
(3) a curing agent.

10

2. The liquid jet recording head according to claim 1, wherein the curing agent is a cationic polymerization initiator, and the resin composition is cured by cationic polymerization.

15

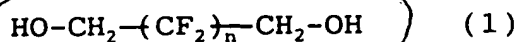
3. The liquid jet recording head according to claim 1, wherein the compound having a functional group reactive to the curable epoxy compound and a fluorocarbon moiety is contained in the resin  
20 composition at a content ranging from 1% to 50% by weight.

4. The liquid jet recording head according to claim 1, wherein the compound having a functional  
25 group reactive to the curable epoxy compound and a fluorocarbon moiety contains fluorine at content ranging from 20% to 80% by weight.

5. The liquid jet recording head according to claim 1, wherein the functional group reactive to the curable epoxy compound is a hydroxyl group.

5 6. The liquid jet recording head according to claim 5, wherein the compound having a functional group reactive to the curable epoxy compound and a fluorocarbon moiety is represented by General Formula (1):

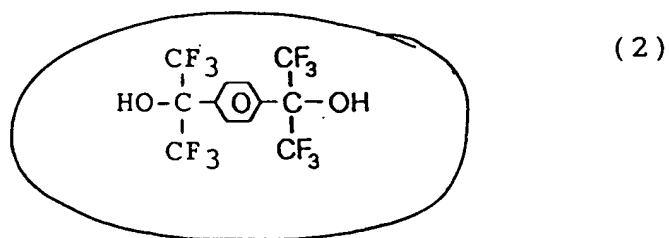
10



where n is an integer of from 1 to 20.

7. The liquid jet recording head according to claim 5, wherein the compound having a functional group reactive to the curable epoxy compound and a fluorocarbon moiety is represented by General Formula (2):

20



8. The liquid jet recording head according to claim 1, wherein the curable epoxy compound is selected from aromatic epoxy compounds.

25

9. The liquid jet recording head according

to claim 1, wherein the curable epoxy compound is selected from alicyclic epoxy compounds.

10. The liquid jet recording head according  
5 to claim 1, wherein the curable epoxy compound is selected from epoxy compounds having an oxycyclohexane skeleton in the molecular structure thereof.

11. A process for producing a liquid jet  
10 recording head, comprising the steps of:  
(I) forming an ink flow path pattern from a soluble resin on an ink discharge pressure-generating element on a base plate,  
(II) forming a coating resin layer on the soluble resin  
15 layer, and  
(III) removing the soluble resin layer by elution,  
wherein the coating resin layer is formed from a cured product of a resin composition comprising:  
(1) a curable epoxy compound,  
20 (2) a compound having a functional group reactive to the curable epoxy compound and a fluorocarbon moiety, and  
(3) a curing agent.

25 12. The process for producing a liquid jet recording head according to claim 11, wherein the process further comprises a step of forming an

discharge opening through the coating resin layer.

13. The process for producing a liquid jet  
recording head according to claim 12, wherein the  
5 coating resin layer is formed from a photosensitive  
resin, and the discharge opening is formed by  
photolithography.

14. The process for producing a liquid jet  
10 recording head according to claim 12, wherein the  
discharge opening is formed by oxygen plasma etching.

15. The process for producing a liquid jet  
recording head according to claim 12, wherein the  
15 discharge opening is formed by excimer laser  
irradiation.

=> file reg

FILE 'REGISTRY' ENTERED AT 13:39:28 ON 10 JUL 1997  
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STRUCTURE FILE UPDATES: 07 JULY 97 HIGHEST RN 190894-37-2  
DICTIONARY FILE UPDATES: 08 JULY 97 HIGHEST RN 190894-37-2

TSCA INFORMATION NOW CURRENT THROUGH DECEMBER 1996

Please note that search-term pricing does apply when  
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=> display history full l1-

(FILE 'HOME' ENTERED AT 13:00:19 ON 10 JUL 1997)

FILE 'LREGISTRY' ENTERED AT 13:00:31 ON 10 JUL 1997

L1 STR  
L2 STR

FILE 'REGISTRY' ENTERED AT 13:07:35 ON 10 JUL 1997

L3 1 SEA SSS SAM L1 OR L2  
L4 SCR 1701 AND 1969  
L5 11 SEA SSS SAM (L1 OR L2) AND L4  
L6 421 SEA SSS FUL (L1 OR L2) AND L4  
SAV ANN255/A L6

FILE 'LREGISTRY' ENTERED AT 13:16:35 ON 10 JUL 1997

L7 STR

FILE 'REGISTRY' ENTERED AT 13:17:33 ON 10 JUL 1997

L8 3 SEA SUB=L6 SSS SAM L7  
L9 64 SEA SUB=L6 SSS FUL L7  
SAV L9 ANN255A/A  
L10 64 SEA L9 AND PMS/CI

FILE 'HCA' ENTERED AT 13:22:17 ON 10 JUL 1997

L11 28 SEA L9  
L12 326 SEA L6  
L13 172482 SEA EPOXY OR EPOXIES OR EPOXID?  
L14 9739 SEA INKJET? OR (INK? OR RECORD? OR HEAD? OR PRINT?) (3A)JE  
T? OR JETPRINT? OR JETHEAD? OR THINKJET? OR RECORD? (2A)HE  
AD?  
L15 43 SEA L12 AND L13  
L16 3 SEA L15 AND L14  
L17 1 SEA L11 AND L14  
L18 3 SEA L16 OR L17  
L19 27 SEA L11 NOT L18  
L20 22 SEA L15 NOT (L18 OR L19)

} titles and selected abstracts

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L21 STR

~~XXXXXXXXXX~~ ENTERED AT 13:29:03 ON 10 JUL 1997

L22 SCR 2043

L23 18 SEA SSS SAM L21 AND L7 AND L22

~~24 356 SEA SSS FOL L21 AND L7 AND L22~~

SAV L24 ANN255B/A

~~XXXXXXXXXX~~ ENTERED AT 13:32:30 ON 10 JUL 1997

L25 164 SEA L24

L26 1 SEA L25 AND L14

L27 3 SEA L26 OR L18

FILE 'REGISTRY' ENTERED AT 13:39:07 ON 10 JUL 1997

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FILE HOME

FILE LREGISTRY

LREGISTRY IS A STATIC LEARNING FILE

FILE REGISTRY

STRUCTURE FILE UPDATES: 07 JULY 97 HIGHEST RN 190894-37-2

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TSCA INFORMATION NOW CURRENT THROUGH DECEMBER 1996

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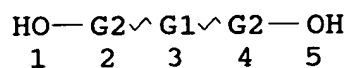
FILE HCA

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FILE COVERS 1967 - 8 Jul 1997 (970708/ED) VOL 127 ISS 2

This file contains CAS Registry Numbers for easy and accurate substance identification.

~~XXXXXXXXXX~~  
L1 STR



REP G1=(1-20) CF2

REP G2=(1-10) CH2

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DEFAULT ECLEVEL IS LIMITED

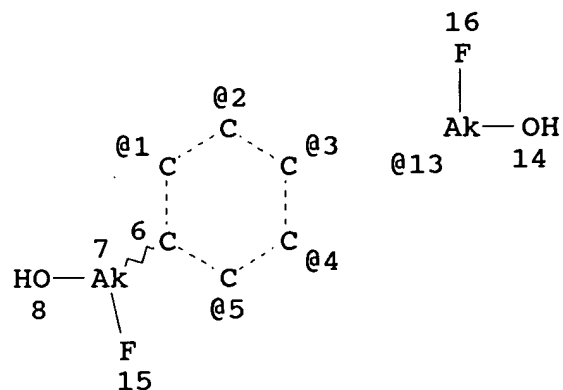
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RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L2 STR



VPA 13-1/2/3/4/5 U

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RSPEC I

NUMBER OF NODES IS 12

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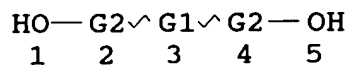
L4 SCR 1701 AND 1969

L6 421 SEA FILE=REGISTRY SSS FUL (L1 OR L2) AND L4

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SEARCH TIME: 00.00.53

L1 STR





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REP G2=(1-10) CH2

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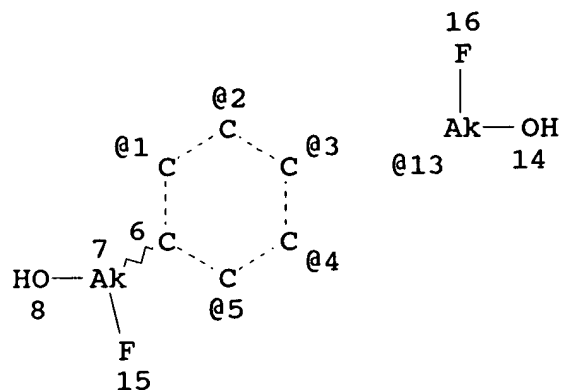
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STEREO ATTRIBUTES: NONE

L2 STR



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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

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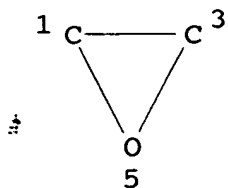
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L7 STR



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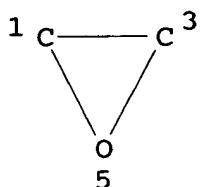
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64 ANSWERS

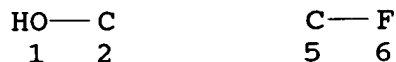
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 L7 STR



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 NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE  
 L21 STR



NODE ATTRIBUTES:  
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 NSPEC IS RC AT 5  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
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STEREO ATTRIBUTES: NONE

L22 SCR 2043  
L24 356 SEA FILE=REGISTRY SSS FUL L21 AND L7 AND L22

100.0% PROCESSED 6749 ITERATIONS 356 ANSWERS  
SEARCH TIME: 00.00.11

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FILE COVERS 1967 - 8 Jul 1997 (970708/ED) VOL 127 ISS 2

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d-3 cbib abs hitstr hitind

HCA COPYRIGHT 1997 ACS  
126:187155 Thermally polymerizable compositions, ink-jet printing heads and apparatus therefrom, and manufacture of ink-jet printing heads. Ookuma, Norio; Toshima, Hiroaki; Myagawa, Masashi (Canon Kk, Japan). Jpn. Kokai Tokkyo Koho JP 09003170 A2 970107 Heisei, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 95-154924 950621.  
AB Title comps. giving cured products with high crosslinking d., comprise (A) cationically polymerizable resins, (B) arom. onium salts of BF<sub>4</sub>-, AsF<sub>6</sub>-, PF<sub>6</sub>-, and CF<sub>3</sub>SO<sub>3</sub>-, and (C) Cu (II) trifluoromethanesulfonate (I). A manuf. process of the heat-resistant printing heads comprises (1) forming ink flowing paths made of solvent-sol. resins on substrates having ink-jet energy-generating elements, (2) covering the ink flowing paths with the above compn. layers, (3) forming patterns of ink-inject ports with O plasma-resistant materials on the covering layers, (4) forming ink-inject ports by dry-etching the covering layers with O plasma using the patterns as masks, and (5) removal of the solvent-sol. resin layers with appropriate solvents. Thus, EHPE 3150 was crosslinked at 100.degree. for 30 min and further at 150.degree. for 1 h in the presence of 0.5 part tert-Bu-p-C<sub>6</sub>H<sub>4</sub>I+-p-C<sub>6</sub>H<sub>4</sub>-tert-Bu PF<sub>6</sub>- and 0.5 part I to give a resin with glass transition temp. >250.degree..  
IT 187346-51-6P  
(epoxy resins crosslinked by arom onium salts and

copper trifluoromethanesulfonate for **ink-jet printing heads** with good heat resistance and adhesion)

RN 187346-51-6 HCA  
CN 1,5-Pentanediol, 2,2,3,3,4,4-hexafluoro-, polymer with Epikote 180H65 (9CI) (CA INDEX NAME)

CM 1

CRN 126040-03-7  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 376-90-9  
CMF C5 H6 F6 O2

HO-CH<sub>2</sub>-(CF<sub>2</sub>)<sub>3</sub>-CH<sub>2</sub>-OH

IC ICM C08G059-68  
ICS B41J002-05; B41J002-16; C08K005-56; C08L101-00; B05C005-00  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 37, 74  
ST arom onium copper trifluoromethanesulfonate crosslinking catalyst; **poxy resin cationic crosslinking catalyst; crosslinking density epoxy resin; ink jet printing head epoxy resin; heat resistance ink jet printing h ad**  
IT Crosslinking catalysts  
Crosslinking  
(cationic; **epoxy resins crosslinked by arom onium salts and copper trifluoromethanesulfonate for ink-jet printing heads with good heat resistance and adhesion)**  
IT **Epoxy resins, uses**  
(crosslinked; **epoxy resins crosslinked by arom onium salts and copper trifluoromethanesulfonate for ink-jet printing heads with good heat resistance and adhesion)**  
IT Heat-resistant materials  
**Ink-jet printers**  
(**epoxy resins crosslinked by arom onium salts and copper trifluoromethanesulfonate for ink-j t printing heads with good heat resistance and adhesion)**

- IT Fluoropolymers, uses  
(**epoxy**, crosslinked; **epoxy** resins crosslinked  
by arom onium salts and copper trifluoromethanesulfonate for  
**ink-jet printing heads** with  
good heat resistance and adhesion)
- IT **Epoxy** resins, uses  
(fluorine-contg., crosslinked; **epoxy** resins crosslinked  
by arom onium salts and copper trifluoromethanesulfonate for  
**ink-jet printing heads** with  
good heat resistance and adhesion)
- IT **Ink-jet printers**  
(**heads**; **epoxy** resins crosslinked by arom  
onium salts and copper trifluoromethanesulfonate for **ink**  
**-jet printing heads** with good heat  
resistance and adhesion)
- IT 25086-25-3P, EHPE 3150  
(crosslinked; **epoxy** resins crosslinked by arom onium  
salts and copper trifluoromethanesulfonate for **ink-**  
**jet printing heads** with good heat  
resistance and adhesion)
- IT 34946-82-2, Copper (II) trifluoromethanesulfonate 61358-25-6  
125604-89-9  
(crosslinking catalysts; **epoxy** resins crosslinked by  
arom onium salts and copper trifluoromethanesulfonate for  
**ink-jet printing heads** with  
good heat resistance and adhesion)
- IT 187346-51-6P  
(**epoxy** resins crosslinked by arom onium salts and  
copper trifluoromethanesulfonate for **ink-jet**  
**printing heads** with good heat resistance and  
adhesion)
- L18 ANSWER 2 OF 3 HCA COPYRIGHT 1997 ACS
- 126:132219 Fluorine-containing **epoxy** resin composition highly  
soluble in solvents for adhesives and photocurable soil-repellent  
hard coatings with good adhesion for **ink-jet**  
**heads**. Imamura, Isao (Canon K. K., Japan; Imamura, Isao).  
PCT Int. Appl. WO 9641835 A1 961227, 57 pp. DESIGNATED STATES: W:  
US; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE. (Japanese). CODEN: PIXXD2. APPLICATION: WO 96-JP1606  
960613. PRIORITY: JP 95-146269 950613; JP 96-140192 960603.
- AB The title compn. comprises 5-80% a polyfunctional **epoxy**  
resin having .gtoreq.2 **epoxy** groups and being free from F  
or Si, 5-40% an **epoxy** compd. having a perfluoro group at  
its terminal, and 5-80% a compd. having .gtoreq.2 groups selected  
from **epoxy**, alc., carboxylate, amino and a mixt. thereof  
together with F or Si. An adhesive for bonding alumite kettle lid  
and wood piece comprised Epikote 828 60, MF-120 10,  
1,3-bis(glycidoxypropyl)tetramethyldisiloxane 30, siloxane  
group-contg. amine hardener LS7430 30, and A-187 silane coupler 3  
parts.

IT 186294-11-1P 186294-15-5P 186294-17-7P

186294-26-8P 186294-29-1P 186294-32-6P

(fluorine-contg. epoxy resin compn. highly sol. in  
solvents for adhesives and photocurable soil-repellent hard  
coatings with good adhesion for ink-jet  
heads)

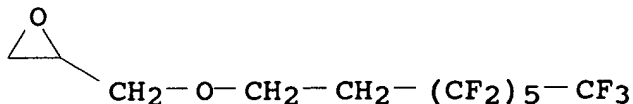
RN 186294-11-1 HCA

CN 7-Oxabicyclo[4.1.0]heptane-3-carboxylic acid, 7-  
oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with  
.alpha.,.alpha.,.alpha.',.alpha.'-tetrakis(trifluoromethyl)-1,4-  
benzenedimethanol and [[(3,3,4,4,5,5,6,6,7,7,8,8,8-  
tridecafluorooctyl)oxy]methyl]oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 122193-68-4

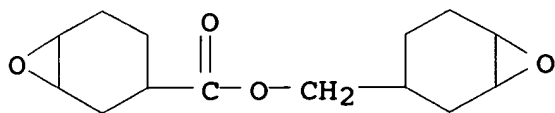
CMF C11 H9 F13 O2



CM 2

CRN 2386-87-0

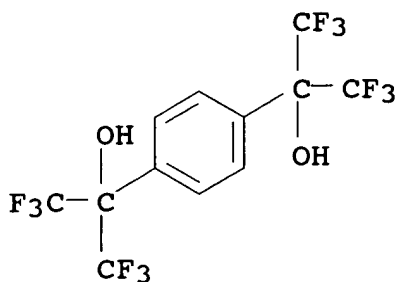
CMF C14 H20 O4



CM 3

CRN 1992-15-0

CMF C12 H6 F12 O2



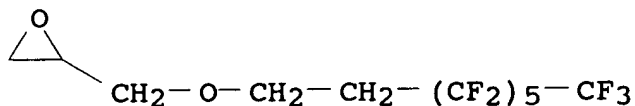
RN 186294-15-5 HCA

CN 1,4-Benzenedimethanol, .alpha.,.alpha.,.alpha.',.alpha.'-  
 tetrakis(trifluoromethyl)-, polymer with 3-oxiranyl-7-  
 oxabicyclo[4.1.0]heptane, [[(3,3,4,4,5,5,6,6,7,7,8,8,8-  
 tridecafluorooctyl)oxy]methyl]oxirane and 2,2'-[[2,2,2-trifluoro-1-  
 (trifluoromethyl)ethylidene]bis(4,1-phenyleneoxymethylene)]bis[oxira  
 ne] (9CI) (CA INDEX NAME)

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CRN 122193-68-4

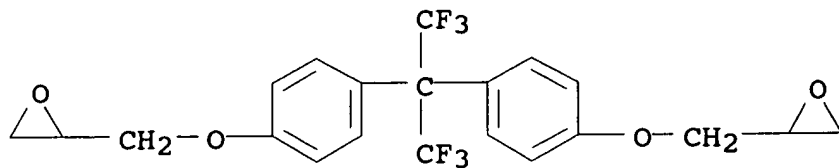
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CM 2

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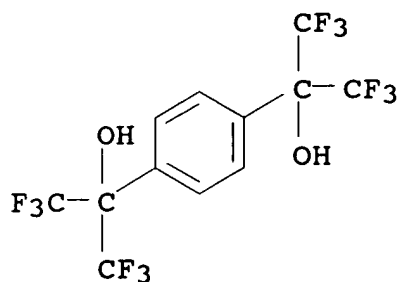
CMF C21 H18 F6 O4



CM 3

CRN 1992-15-0

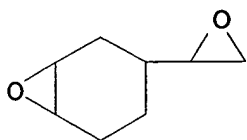
CMF C12 H6 F12 O2



CM 4

CRN 106-87-6

CMF C8 H12 O2



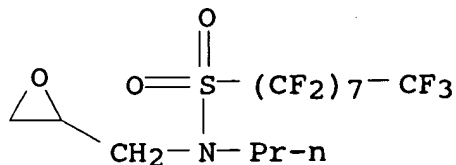
RN 186294-17-7 HCA

CN 1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-N-(oxiranylmethyl)-N-propyl-, polymer with 3-oxiranyl-7-oxabicyclo[4.1.0]heptane, .alpha.,.alpha.,.alpha.',.alpha.ha.'-tetrakis(trifluoromethyl)-1,4-benzenedimethanol and 1,1,3,3-tetramethyl-1,3-bis[3-(oxiranylmethoxy)propyl]disiloxane (9CI) (CA INDEX NAME)

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CRN 77620-64-5

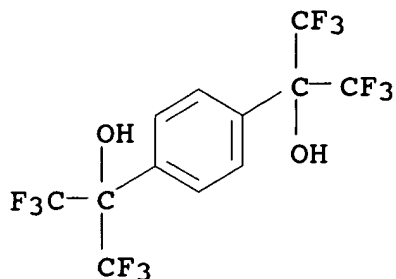
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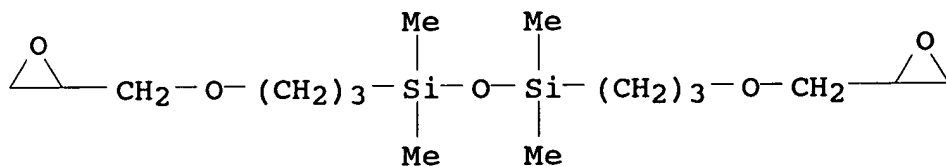


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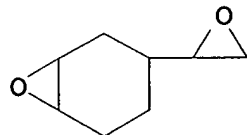
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CRN 126-80-7  
CMF C16 H34 O5 Si2



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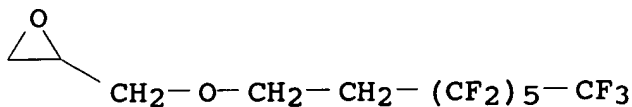
CRN 106-87-6  
CMF C8 H12 O2



RN 186294-26-8 HCA  
CN 1,4-Benzenedimethanol, .alpha.,.alpha.,.alpha.',.alpha.'-  
tetrakis(trifluoromethyl)-, polymer with  
[[ (3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)oxy]methyl]oxirane  
and 2,2'-[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis(4,1-  
phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

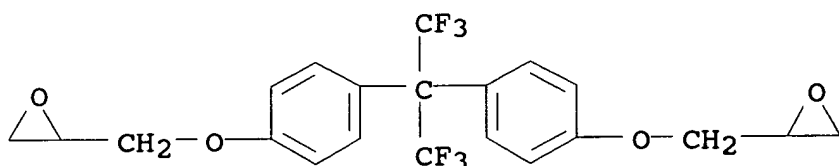
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CRN 122193-68-4  
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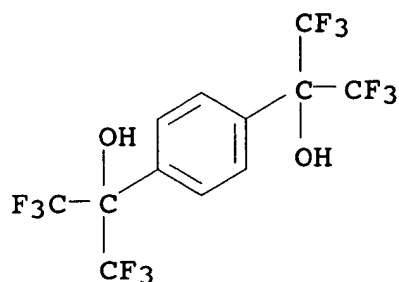
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CRN 2994-63-0  
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CM 3

CRN 1992-15-0  
CMF C12 H6 F12 O2

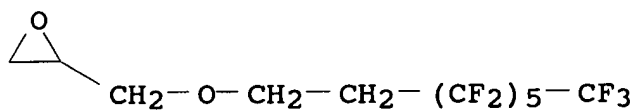


RN 186294-29-1 HCA  
CN 2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl ester, polymer with 3-oxiranyl-7-oxabicyclo[4.1.0]heptane, .alpha.,.alpha.,.alpha.',.alpha.'-tetrakis(trifluoromethyl)-1,4-benzenedimethanol, [(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)oxy]methyl]oxirane and 2,2'-[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis(4,1-phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 122193-68-4

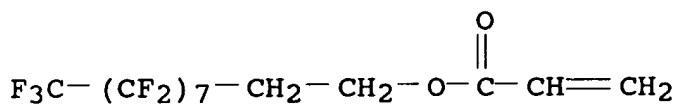
CMF C11 H9 F13 O2



CM 2

CRN 27905-45-9

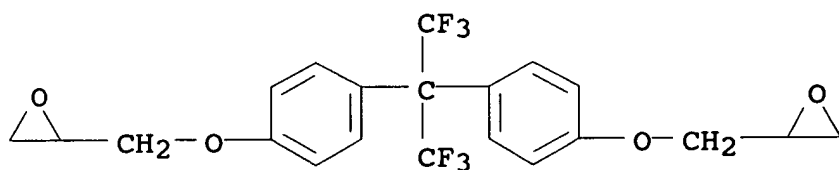
CMF C13 H7 F17 O2



CM 3

CRN 2994-63-0

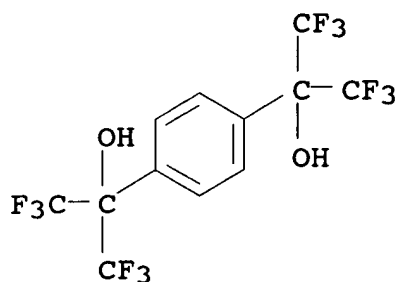
CMF C21 H18 F6 O4



CM 4

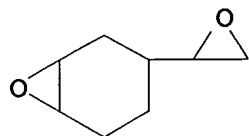
CRN 1992-15-0

CMF C12 H6 F12 O2



CM 5

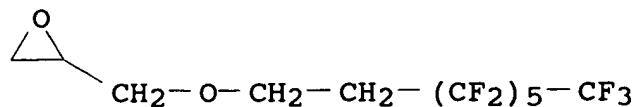
CRN 106-87-6  
CMF C8 H12 O2



RN 186294-32-6 HCA  
CN 1,4-Benzenedimethanol, .alpha.,.alpha.,.alpha.',.alpha.'-  
tetrakis(trifluoromethyl)-, polymer with 1,1,2,2,3,3,4,4,5,5,6,6-  
dodecafluoro-1,6-hexanediol, 3-oxiranyl-7-oxabicyclo[4.1.0]heptane,  
[[ (3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)oxy)methyl]oxirane  
and 2,2'-[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis(4,1-  
phenyleneoxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

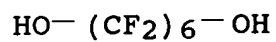
CM 1

CRN 122193-68-4  
CMF C11 H9 F13 O2



CM 2

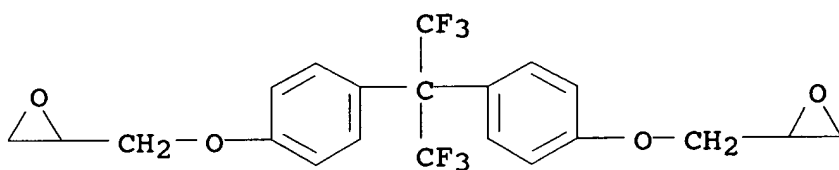
CRN 75609-51-7  
CMF C6 H2 F12 O2



CM 3

CRN 2994-63-0

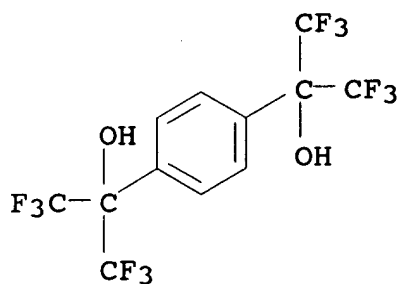
CMF C21 H18 F6 O4



CM 4

CRN 1992-15-0

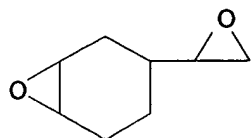
CMF C12 H6 F12 O2



CM 5

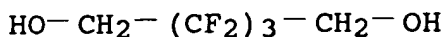
CRN 106-87-6

CMF C8 H12 O2



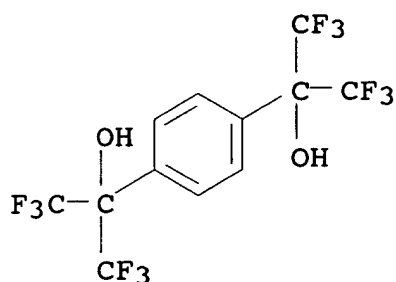
IC ICM C08L063-00  
ICS C08G059-20; C08G059-40; C09D163-00; C09J163-00; B41J002-05  
CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 74  
ST **epoxy** compn fluorine contg adhesive; **ink**  
j t head **epoxy** resin; coating fluorine  
contg **epoxy** resin  
IT Adhesives  
Printing apparatus  
Ships  
(fluorine-contg. **epoxy** resin compn. highly sol. in  
solvents for adhesives and photocurable soil-repellent hard  
coatings with good adhesion for **ink-jet**  
heads)  
IT **Epoxy** resins, uses  
(fluorine-contg. **epoxy** resin compn. highly sol. in  
solvents for adhesives and photocurable soil-repellent hard  
coatings with good adhesion for **ink-jet**  
heads)  
IT Coatings  
(for ships; fluorine-contg. **epoxy** resin compn. highly  
sol. in solvents for adhesives and photocurable soil-repellent  
hard coatings with good adhesion for **ink-jet**  
heads)  
IT 30603-97-5P 186294-09-7P **186294-11-1P** 186294-13-3P  
**186294-15-5P 186294-17-7P** 186294-20-2P  
186294-22-4P 186294-24-6P **186294-26-8P** 186294-27-9P  
186294-28-0P **186294-29-1P** 186294-30-4P  
**186294-32-6P**  
(fluorine-contg. **epoxy** resin compn. highly sol. in  
solvents for adhesives and photocurable soil-repellent hard  
coatings with good adhesion for **ink-jet**  
heads)  
L18 ANSWER 3 OF 3 HCA COPYRIGHT 1997 ACS  
126:119452 **Ink-jet recording head**  
with multiple **ink-jet** orifices. Ookuma, Norio;  
Myagawa, Masashi; Toshima, Hiroaki (Canon Kk, Japan). Jpn. Kokai  
Tokkyo Koho JP 08290572 A2 961105 Heisei, 10 pp. (Japanese).  
CODEN: JKXXAF. APPLICATION: JP 95-96737 950421.  
AB The **recording head** is formed with a resin which  
is cured from a compn. contg. a curable **epoxy** compd., a  
fluorocarbon-having compd., and a crosslinking agent. The  
crosslinking agent may be a cationic polymn. initiator, the  
fluorocarbon-having compd. has a formula  $\text{HO-CH}_2\text{-(CF}_2\text{)}_n\text{-CH}_2\text{-OH}$  ( $n =$   
1-20), and the **epoxy** compd. may be an aliph. ring or an  
arom. one contg. oxycyclohexane skeleton.  
IT **376-90-9 1992-15-0**  
(F-contg. compd. contained in curable compn. for **ink-**  
**jet recording head**)  
RN 376-90-9 HCA

CN 1,5-Pentanediol, 2,2,3,3,4,4-hexafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 1992-15-0 HCA

CN 1,4-Benzenedimethanol, .alpha.,.alpha.,.alpha.',.alpha.'-tetrakis(trifluoromethyl)- (9CI) (CA INDEX NAME)



IC ICM B41J002-05

ICS B41J002-16; C08G059-40; C08G059-68

CC 47-6 (Apparatus and Plant Equipment)

ST **ink jet recording head** cured

resin; **epoxy** compd cured resin **recording**

**head**; fluorocarbon having compd cured resin; cationic

crosslinking agent cured resin

IT **Ink-jet printers**

(**heads**; formed with a resin cured from compn. contg.

curable **epoxy** compd., fluorocarbon-having compd., and

crosslinking agent)

IT 307-30-2 376-90-9 1992-15-0 2093-04-1

(F-contg. compd. contained in curable compn. for **ink-jet recording head**)

=> d [REDACTED] 1- [REDACTED]

L19 ANSWER 1 OF 27 HCA COPYRIGHT 1997 ACS

TI Polymers for optical-communication device fabrication. Optical adhesives and polyimide waveguides

L19 ANSWER 2 OF 27 HCA COPYRIGHT 1997 ACS

TI New Families of Photocurable Oligomeric Fluoromonomers for Use in Dental Composites

L19 ANSWER 3 OF 27 HCA COPYRIGHT 1997 ACS

TI Detection of organic solvent vapors via acoustic surface wave sensors applying chemometric methods

- L19 ANSWER 4 OF 27 HCA COPYRIGHT 1997 ACS  
TI Chemiluminescent Chemical Sensors for Oxygen and Nitrogen Dioxide
- L19 ANSWER 5 OF 27 HCA COPYRIGHT 1997 ACS  
TI Synthesis and properties of fluorine-containing epoxy(meth)acrylate resins
- L19 ANSWER 6 OF 27 HCA COPYRIGHT 1997 ACS  
TI Studies on new nonshrinking, thermally stable Araldite-type photopolymers with pendent aryl acryloyl groups. 5. Partially fluorinated photopolymers
- L19 ANSWER 7 OF 27 HCA COPYRIGHT 1997 ACS  
TI Plastic ferrules for rapid adhesion of optical fiber wires
- L19 ANSWER 8 OF 27 HCA COPYRIGHT 1997 ACS  
TI Polyester resin compositions for powdered coating materials
- L19 ANSWER 9 OF 27 HCA COPYRIGHT 1997 ACS  
TI Fluorinated surfactant monomers for polymer surface modification
- L19 ANSWER 10 OF 27 HCA COPYRIGHT 1997 ACS  
TI Magnetic coating compositions containing fluoropolyols
- L19 ANSWER 11 OF 27 HCA COPYRIGHT 1997 ACS  
TI Epoxy resins prepared from perfluoroalkylene telomers
- L19 ANSWER 12 OF 27 HCA COPYRIGHT 1997 ACS  
TI Fluorinated epoxy-fluorocarbon coating compositions
- L19 ANSWER 13 OF 27 HCA COPYRIGHT 1997 ACS  
TI Curable resin compositions
- L19 ANSWER 14 OF 27 HCA COPYRIGHT 1997 ACS  
TI Topcoat material for cement-based material
- L19 ANSWER 15 OF 27 HCA COPYRIGHT 1997 ACS  
TI Submersible antifouling paint
- L19 ANSWER 16 OF 27 HCA COPYRIGHT 1997 ACS  
TI Copper foil laminates
- L19 ANSWER 17 OF 27 HCA COPYRIGHT 1997 ACS  
TI Potentiometric microdetermination of oxiranes
- L19 ANSWER 18 OF 27 HCA COPYRIGHT 1997 ACS  
TI Fluorinated polyether network polymers
- L19 ANSWER 19 OF 27 HCA COPYRIGHT 1997 ACS  
TI Depositing a metal pattern on a surface



L19 ANSWER 20 OF 27 HCA COPYRIGHT 1997 ACS  
TI Fluorinated polyepoxy and polyurethane coatings

L19 ANSWER 21 OF 27 HCA COPYRIGHT 1997 ACS  
TI Cross-linked fluoropolymer coatings

L19 ANSWER 22 OF 27 HCA COPYRIGHT 1997 ACS  
TI Fluorinated epoxy resins

L19 ANSWER 23 OF 27 HCA COPYRIGHT 1997 ACS  
TI Curable fluorinated polyols

L19 ANSWER 24 OF 27 HCA COPYRIGHT 1997 ACS  
TI New fluorinated epoxies and polymeric derivatives

L19 ANSWER 25 OF 27 HCA COPYRIGHT 1997 ACS  
TI Polyfluoroepoxides and epoxy resins containing fluorine on the aromatic carbon structure, having an improved water resistance

L19 ANSWER 26 OF 27 HCA COPYRIGHT 1997 ACS  
TI Fluoropolymers for coatings formed in situ

L19 ANSWER 27 OF 27 HCA COPYRIGHT 1997 ACS  
TI Highly fluorinated polyurethanes

=> d [REDACTED] 10,16,19 cbib abs hitstr hitind

[REDACTED] HCA COPYRIGHT 1997 ACS  
113:164250 Magnetic coating compositions containing fluoropolyols.  
Harnish, Daniel Franklin; Pickens, Donald; Brautigam, Richard John  
(Allied-Signal, Inc., USA). PCT Int. Appl. WO 9006346 A1 900614, 29  
pp. DESIGNATED STATES: W: JP, KR; RW: AT, BE, CH, DE, ES, FR, GB,  
IT, LU, NL, SE. (English). CODEN: PIXXD2. APPLICATION: WO  
89-US5094 891117. PRIORITY: US 88-277089 881128.

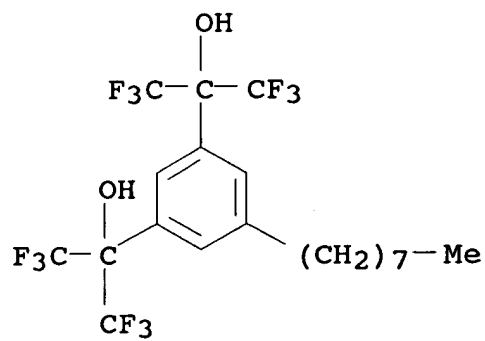
AB A class of fluorinated polyols, when added to formulated dispersions  
used to make a magnetic particle-based coating, not only improves  
the dispersion of the particles in the formulation during manuf. but  
also improves the wear characteristics of the cured coating during  
use. The fluorinated polyol may be prepd. either by the reaction of  
a diglycidyl ether with a diol or by the reaction of 2 diols with  
epichlorohydrin.

IT 129846-59-9  
(binders contg., for magnetic recording media)

RN 129846-59-9 HCA  
CN 1,3-Benzenedimethanol, 5-octyl-.alpha.,.alpha.,.alpha.',.alpha.'-  
tetrakis(trifluoromethyl)-, polymer with (chloromethyl)oxirane and  
.alpha.,.alpha.,.alpha.',.alpha.'-tetrakis(trifluoromethyl)-1,3-  
benzenedimethanol (9CI) (CA INDEX NAME)

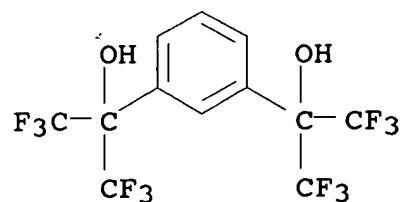
CM 1

CRN 129846-58-8  
CMF C20 H22 F12 O2



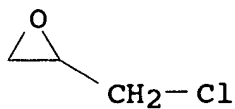
CM 2

CRN 802-93-7  
CMF C12 H6 F12 O2



CM 3

CRN 106-89-8  
CMF C3 H5 Cl O



IC ICM C09D005-23  
ICS G11B005-702; C08G059-30  
CC 77-8 (Magnetic Phenomena)  
Section cross-reference(s): 42  
IT **129846-59-9**

(binders contg., for magnetic recording media)

L19 ANSWER 16 OF 27 HCA COPYRIGHT 1997 ACS

99:106463 Copper foil laminates. (Hitachi Cable, Ltd., Japan; Asahi Glass Co., Ltd.). Jpn. Kokai Tokkyo Koho JP 58031742 A2 830224 Showa, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 81-129138 810818.

AB Cu foil laminates for printed circuit boards with high reliability were prepd. using fluoropolymer adhesives. Thus, an adhesive soln. was prepd. from 51:17:23:9 chlorotrifluoroethylene-cyclohexyl vinyl ether-Et vinyl ether-hydroxybutyl vinyl ether copolymer [81800-92-2] 100, Cymel 325 hardener 10, p-toluenesulfonic acid 0.5, xylene 126, and BuOH 126 parts. The adhesive was coated an anodized side of a single-side anodized Cu foil (35 .mu. thickness) to 25 .mu. thickness, dried at 100.degree. for 10 min, and hot-pressed with a 1.6 mm epoxy-paper board at 170.degree. and 50 kg/cm2 for 40 min to give a laminate with excellent cohesion and heat resistance.

IT 86994-50-5

(adhesives, for copper foil laminates for printed circuit boards)

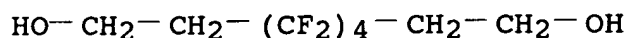
RN 86994-50-5 HCA

CN 1,8-Octanediol, 3,3,4,4,5,5,6,6-octafluoro-, polymer with (chloromethyl)oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 83192-87-4

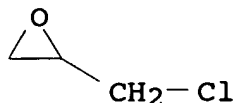
CMF C8 H10 F8 O2



CM 2

CRN 106-89-8

CMF C3 H5 Cl O



IC B32B015-08

CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 76

IT 81800-92-2 82148-11-6 86994-50-5

(adhesives, for copper foil laminates for printed circuit boards)

L19 ANSWER 19 OF 27 HCA COPYRIGHT 1997 ACS

88:98214 Depositing a metal pattern on a surface. Baron, William James; Kenney, John Thomas (Western Electric Co., Inc., USA). Ger. Offen. DE 2709928 770915, 47 pp. (German). CODEN: GWXXBX. PRIORITY: US 76-664610 760308.

AB Nonconductive substrates are pattern-coated with Cu for printed circuits. A colloid-phobic film is applied on the areas of the substrate which are not to be coated, whereas the areas to be coated are sensitized with a colloidal sol and activated for further electroless deposition of Cu. The colloid-phobic film can be poly(tetrafluoroethylene), polyethylene, a dimethoxy polysiloxane, a polyfluoroalkyl ester, a polyfluoro epoxy resin, and/or SiO<sub>2</sub> with chem. bound hexamethyldisilazane on its surface. Thus, a colloid-phobic compn. was prepd. from 22 g screen-printing material contg. 8% Et cellulose and 92% .beta.-terpineol and 9 g SiO<sub>2</sub> with 0.01-30% chem. bound hexamethylsilazane on the surface. This material was applied by screen printing to the surface of an epoxy-glass plate and dried at 70.degree. to form a specified pattern. Then, a colloidal sensitizing sol was prepd. by dissolving 10 g SnCl<sub>2</sub> and 10 mL concd. HCl in 1 L H<sub>2</sub>O, the substrate was held in the sol for 1 min, and water-rinsed to remove the sol from the areas covered with the colloid-phobic compn. The sensitized substrate areas were activated by dipping in a 0.05% soln. of PdCl<sub>2</sub> for 2 min and subsequently held 10 min in a bath contg. CuSO<sub>4</sub> 15, NiSO<sub>4</sub>.6H<sub>2</sub>O 3, HCHO 9, Na K tartrate 30, NaOH 8 g/L, and Na<sub>2</sub>SO<sub>3</sub>.7H<sub>2</sub>O 1 ppm for the electroless deposition of a 0.25-.mu.-thick Cu film.

IT 65684-03-9

(colloid-phobic coatings contg., for printed circuit manuf.)

RN 65684-03-9 HCA

CN 1,3-Benzenedimethanol, .alpha.,.alpha.,.alpha.',.alpha.'-tetrakis(trifluoromethyl)-, polymer with (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and 2,2,3,3,4,4-hexafluoro-1,5-pentanediol (9CI) (CA INDEX NAME)

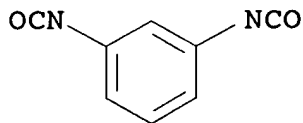
CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS

CDES 8:ID

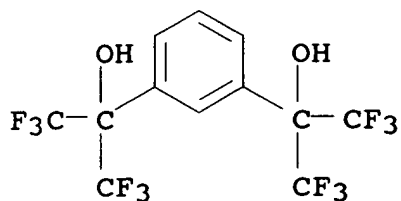


D1-Me

CM 2

CRN 802-93-7

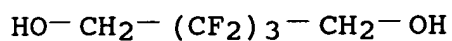
CMF C12 H6 F12 O2



CM 3

CRN 376-90-9

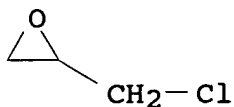
CMF C5 H6 F6 O2



CM 4

CRN 106-89-8

CMF C3 H5 Cl O



IC C23C003-02

CC 76-14 (Electric Phenomena)

Section cross-reference(s): 37

IT 7631-86-9D, hexamethyldisilazane-modified 9002-84-0 9002-88-4

9011-05-6 65595-84-8 65684-03-9

(colloid-phobic coatings contg., for printed circuit manuf.)

=&gt; d 1-22

- L20 ANSWER 1 OF 22 HCA COPYRIGHT 1997 ACS  
TI Active energy ray-curable resin compositions, liquid crystal devices, and their manufacture
- L20 ANSWER 2 OF 22 HCA COPYRIGHT 1997 ACS  
TI Segregating coating compositions, applying these compositions to substrates, and copolymers for preparation of these compositions
- L20 ANSWER 3 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluoro(meth)acrylate esters and their coatings for heat-resistant optical fibers
- L20 ANSWER 4 OF 22 HCA COPYRIGHT 1997 ACS  
TI Thermosetting cyanate resin compositions and electronic materials therewith
- L20 ANSWER 5 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluoro polyester-containing compositions for powder coating
- L20 ANSWER 6 OF 22 HCA COPYRIGHT 1997 ACS  
TI Spirodilactones as curing agents for epoxy resins
- L20 ANSWER 7 OF 22 HCA COPYRIGHT 1997 ACS  
TI Anionic copolymerization of bislactone end-capped diols with the diglycidyl ether of bisphenol A
- L20 ANSWER 8 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluorine-containing diglycidyl ethers and their manufacture
- L20 ANSWER 9 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluorinated bislactone monomers for ring-opening polymerization
- L20 ANSWER 10 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluorine-containing ethers as cross-linking agents and monomers
- L20 ANSWER 11 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluoro- and epoxy-containing (meth)acrylate esters
- L20 ANSWER 12 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluorine-containing alicyclic and aromatic cyclic compounds, process, and adhesive composition containing the compounds
- L20 ANSWER 13 OF 22 HCA COPYRIGHT 1997 ACS  
TI Preparation of fluorine- and azido group-containing compounds
- L20 ANSWER 14 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluorinated crosslinking agents for poxy resins
- L20 ANSWER 15 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluoro compound-containing primers

L20 ANSWER 16 OF 22 HCA COPYRIGHT 1997 ACS  
TI Radiation-hardenable composition

L20 ANSWER 17 OF 22 HCA COPYRIGHT 1997 ACS  
TI Synthesis and reactions of perfluoro dialdehydes

L20 ANSWER 18 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluorinated epoxy resins containing  
polytetrafluoroalkylene fillers

L20 ANSWER 19 OF 22 HCA COPYRIGHT 1997 ACS  
TI Advanced fluoroepoxy for coatings systems

L20 ANSWER 20 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluoro diglycidyl ethers

L20 ANSWER 21 OF 22 HCA COPYRIGHT 1997 ACS  
TI Substituent effects in the reaction rates of 2-  
arylhexafluoroisopropyl glycidyl ethers with dibutylamine

L20 ANSWER 22 OF 22 HCA COPYRIGHT 1997 ACS  
TI Fluorocarbon polymers for use as propellant binders

=> d [REDACTED] 22 cbib abs hitstr hitind

[REDACTED] COPYRIGHT 1997 ACS

72:81004 Fluorocarbon polymers for use as propellant binders. Cottrill, Ernest L.; Green, Joseph (United States Dept. of the Navy). U.S. US 3493546 700203, 2 pp. (English). CODEN: USXXAM. APPLICATION: US 680401.

AB Hexafluoropentanediol (I) reacts with perfluoroglutaryl chloride (II) to prep. a polymer which is then treated with HOCH<sub>2</sub>CO<sub>2</sub>H to provide CH<sub>2</sub>CO<sub>2</sub>H end groups on the polymer chains. This polymer has a pot life of >1 hr, and cures at room temp. after being mixed with curing agents, such as isocyanates, triol-isocyanate mixts., and imines. An other polymer prepd. from I and perfluoroglutaric acid is treated with succinic anhydride to provide CH<sub>2</sub>CO<sub>2</sub>H end groups on the polymer chains. This polymer also has a pot life of >1 hr and cures at room temp. after being mixed with epoxy resins, diimines, triimines, or similar curing agents. The rubbery polymers are useful as propellant binders and are compatible with high-energy propellants, such as nitronium perchlorate. Previous fluorocarbon polymers prepd. similarly but contg. no CH<sub>2</sub>CO<sub>2</sub>H end groups have unsuitable curing properties (e.g., have a short pot life or cannot be cured) for use as propellant binders. Thus, 6 moles I was mixed with 5 moles II to prep. a polymer which was treated with HOCH<sub>2</sub>CO<sub>2</sub>H to provide CH<sub>2</sub>CO<sub>2</sub>H end groupson the polymer chains. The polymer was useful as a propellant binder.

IT 26590-73-8

(carboxymethyl-terminated, propellant binders)

RN 26590-73-8 HCA  
CN Glutaric acid, hexafluoro-, polyester with 2,2,3,3,4,4-hexafluoro-1,5-pentanediol (8CI) (CA INDEX NAME)

CM 1

CRN 376-90-9  
CMF C5 H6 F6 O2

$\text{HO}-\text{CH}_2-(\text{CF}_2)_3-\text{CH}_2-\text{OH}$

CM 2

CRN 376-73-8  
CMF C5 H2 F6 O4

$\text{HO}_2\text{C}-(\text{CF}_2)_3-\text{CO}_2\text{H}$

IC C08G  
NCL 260078400  
CC 50 (Propellants and Explosives)  
IT 26546-05-4 26590-73-8  
(carboxymethyl-terminated, propellant binders)

(FILE 'REGISTRY' ENTERED AT 13:39:07 ON 10 JUL 1997)

FILE 'REGISTRY' ENTERED AT 13:39:28 ON 10 JUL 1997

FILE 'HCA' ENTERED AT 13:44:07 ON 10 JUL 1997

FILE 'STNGUIDE' ENTERED AT 13:46:16 ON 10 JUL 1997

FILE 'HCA' ENTERED AT 13:49:43 ON 10 JUL 1997

L28 2655 S L13 (25A) (FLUORO? OR FLUORIN? OR PERFLUORO? OR PERFLUO  
L29 6 S L28 AND L14

3 S L29 NOT L18

=> d 3 cbib abs hitstr hitind

ANSWER 1 OF 3 HCA COPYRIGHT 1997 ACS

125:127838 R cording material for ink-j t

printer. Okajima, Tetsuya; Aizawa, Hidekuni (Teikoku

Printing Ink Mfg, Japan; Sony Corp). Jpn. Kokai Tokkyo Koho JP  
08099458 A2 960416 Heisei, 8 pp. (Japanese). CODEN: JKXXAF.



APPLICATION: JP 94-261574 940930.

AB The title material comprises a substrate coated with an ink-receiving layer formed by laminating an adhesive layer based on .gtoreq.1 synthetic resin selected from polyesters, cellulose, acrylic resins, poly(vinyl chloride), polyimides, and polyurethanes and an ink-receptive layer contg. a water-sol. or hydrophilic resin, a hydrophilic pigment, and a water-miscible solvent. The title material comprises a substrate coated with an ink-receiving layer formed by successively laminating an ink-receptive layer contg. the water-sol. or hydrophilic resin and hydrophilic pigment and a surface protective layer based on .gtoreq.1 synthetic resin selected from urethane resins, acrylic resins, **epoxy** resins, and **fluororesins**. The material shows good ink-coloring properties and provides high-resoln. images. Thus, a polycarbonate support was coated with Sericol EG-671 (polyester resin screen ink) and an aq. compn. contg. Gohsenol GH-20 [poly(vinyl alc.)], silica powder, starch, and PGM (polyhydric alc.) to give an **ink-jet recording sheet**.

IC ICM B41M005-00

ICS B32B007-06; B32B007-12

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 37

ST **printing material ink jet printer; adhesive layer receptor ink jet recording; protective coating ink jet printing material**

IT Polyesters, uses

Polyimides, uses

Urethane polymers, uses

(adhesive layer; **printing material for ink-jet printer**)

IT Adhesives

(polymer; **printing material for ink-jet printer**)

IT **Printing, nonimpact**

(**ink-jet, printing material for ink-jet printer**)

IT 9002-89-5, Polyvinyl alcohol 105521-74-2, Polyvinyl alcohol (Gohsenol GH 20, ink-receptive layer component; **printing material for ink-jet printer**)

IT 179157-36-9, Sericol POS 611

(acrylic adhesive; **printing material for ink-jet printer**)

IT 9002-86-2, Polyvinyl chloride 9004-34-6D, Cellulose, polymers (adhesive layer; **printing material for ink-jet printer**)

IT 179157-19-8, Sericol EG 671

(polyester adhesive; **printing material for ink-jet printer**)

IT 179157-44-9, Sericol POS Medium 179157-60-9, Sericol UV-OPT 555

(protective layer, UV-hardening; **printing material for ink-j t printer**)

L30 ANSWER 2 OF 3 HCA COPYRIGHT 1997 ACS

114:63786 Adhesive compositions. Kroyan, S. A.; Karapetyan, A. N.; Beglaryan, A. A.; Naujokajtiene, D.; Epishkin, Yu. S.; Jasinavicius, R. (USSR). U.S.S.R. SU 1574618 A1 900630 From: Otkrytiya, Izobret. 1990, (24), 92. (Russian). CODEN: URXXAF. APPLICATION: SU 88-4485035 880704.

AB An adhesive compn. contg. dian epoxy resin, dicyandiamide (I), and solvent has increased strength of bonding permalloy units of cores of Sendust magnetic heads and shortened hardening period by adding N,N-dimethyl-N'-(3-trifluoromethylphenyl)urea (II) and semicarbazone 5-nitrofurfural (III). Thus, a compn. contained dian epoxy resin 19.5-35.1, I 1.2-5.5, II 0.3-0.8, III 0.1-0.5, and solvent 58.1-78.9%.

IC ICM C09J163-00

ICS C08G059-68

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 37

ST adhesive **epoxy fluorophenylurea**; semicarbazone nitrofurfural epoxy resin adhesive; magnetic **recording**

**h ad epoxy adhesive**

IT **Recording apparatus**

(magnetic **heads**, Sendust, adhesives for, epoxy resin-based)

L30 ANSWER 3 OF 3 HCA COPYRIGHT 1997 ACS

108:78541 Lubricants for magnetic **heads in recording** medium. Fujimura, Masayuki; Samada, Nobuyuki (Canon Electronics, Inc., Japan). Jpn. Kokai Tokkyo Koho JP 62240383 A2 871021 Showa, 3 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 86-81997 860411.

AB The sliding surface of the magnetic **head in a recording medium** is spray-coated with a layer of **fluoropolymer film or epoxy resin film**.

Preferably, the sliding surface is engraved to fix the lubricating layer. The squeaky noise from the magnetic head can be significantly reduced.

IC ICM C10M107-38

ICI C10N040-02, C10N040-18, C10N050-08

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

ST lubricant magnetic **head recording** medium; fluoropolymer film lubricant magnetic head; epoxy resin lubricant magnetic head

IT Fluoropolymers

Epoxy resins, uses and miscellaneous (films, lubricants, for magnetic **heads in recording app.**)

IT Lubricants

(fluoropolymer films, for magnetic **h ads in recording media**)

IT R cording apparatus  
(magnetic h ads, lubricants, fluoropolymers as)

[REDACTED] ENTERED AT 13:49:43 ON 10 JUL 1997)

L31 74224 S E3  
E EPOXY RESINS/CV  
E FLUOROPOLYMERS/CV

L32 19186 S E3

L33 911 S L31 AND L32

L34 4 S L33 AND L14

[REDACTED] 2 S L34 NOT (L18 OR L30)

=> d [REDACTED] 1-2 cbib abs hitind

[REDACTED] ANSWER 1 OF 2 HCA COPYRIGHT 1997 ACS

126:244900 Protective agents for water-based ink-printed materials and protection method. Mori, Hidemasa; Ochiai, Tetsuya (Taiho Kogyo Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 09048180 A2 970218 Heisei, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 95-221211 950808.

AB Claimed protective agents comprise materials having water-proofing properties and transparency. Claimed protection method comprises coating the agents on printed materials. The agents prevent outflow of ink-jet prints.

ICM B41M007-00

ICS B05D005-00; B05D007-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 42

ST ink jet printing protective coating

IT Coatings

Glues

**Ink-jet printing**

(protective agents contg. water-proofing and transparent materials for water-based ink-printed materials and protection method)

IT Alkyd resins

Polysiloxanes

Rosin

Acrylic polymers, uses

**Epoxy resins, uses**

**Fluoropolymers, uses**

Gelatins, uses

Paraffin waxes, uses

Polyurethanes, uses

(protective agents contg. water-proofing and transparent materials for water-based ink-printed materials and protection method)

L35 ANSWER 2 OF 2 HCA COPYRIGHT 1997 ACS

124:204287 Method for fabricating an ink-jet head having improved discharge port formation face.  
Yamamoto, Hajime; Murai, Keiichi; Ito, Fujihiro (Canon K. K., Japan). U.S. US 5482660 A 960109, 23 pp. (English). CODEN: USXXAM. APPLICATION: US 92-969354 921030. PRIORITY: JP 91-286655 911031; JP 91-301871 911116.

AB The method comprises (a) forming a ceiling plate having a discharge port surface, the ceiling plate comprising a high mol. resin and an amt. of .apprx.5-60% of ceiling plate of dispersed water-repellent grains selected from fluoro-oligomers, fluoropolymers and fluorinated graphites, wherein the water-repellent grains are exposed on .gtoreq.1 discharge port peripheral face by irradiating the discharge port peripheral face with an excimer laser; (b) laminating the ceiling plate either during step (a) or after step (a) to a substrate with an ink discharge energy generating device arranged on a surface of the substrate to form .gtoreq.1 ink liq. channel communicating with an ink liq. chamber corresponding to the energy generating device; and (c) forming on the discharge port surface .gtoreq.1 discharge port communicating with .gtoreq.1 ink liq. channel.

IC ICM B29C045-00  
ICS B29C071-04

NCL 264474000

CC 38-2 (Plastics Fabrication and Uses)  
Section cross-reference(s): 42, 74

ST fluoropolymer ink jet head;  
fluorinated graphite ink jet head

IT Ceramic materials and wares  
(fillers; method for fabricating ink-jet heads having improved discharge port formation face)

IT Metals, uses  
(fillers; method for fabricating ink-jet heads having improved discharge port formation face)

IT Fluoropolymers  
(method for fabricating ink-jet heads having improved discharge port formation face)

IT Epoxy resins, uses  
Polysulfones, uses  
Urethane polymers, uses  
(method for fabricating ink-jet heads having improved discharge port formation face)

IT Lasers  
(excimer, method for fabricating ink-jet heads having improved discharge port formation face)

IT Molding of plastics and rubbers  
(injection, method for fabricating ink-jet heads having improved discharge port formation face)

IT Printing apparatus  
(ink-jet, method for fabricating ink-jet heads having improved discharge port formation face)

- IT Polysulfones, uses  
(polyether-, method for fabricating **ink-j t**  
**heads** having improved discharge port formation face)
- IT Polyethers, uses  
(polysulfone-, method for fabricating **ink-jet**  
**heads** having improved discharge port formation face)
- IT Coating process  
(spin, method for fabricating **ink-jet**  
**heads** having improved discharge port formation face)
- IT 11113-63-6, Fluorinated graphite  
(method for fabricating **ink-jet heads**  
having improved discharge port formation face)